

# OREGON TUALATIN VALLEY AMATEUR RADIO CLUB



An ARRL Special Service Club

January 1992

Next Meeting January 8, 1992

## Presidents Corner

By Alan Churchill, AA7CV

Dear Members,

I am writing this while at my father's bedside in Astoria. Eighty years of active living are forcing a rest on Dad. While I sit at his bedside and hold his hand, I think back over all the wonderful memories he gave me. I was just six when Dad who brought home that first batch of wire from his radio station. He gently instructed me as to why it wasn't a good idea to push the wires into wall sockets. He and Mom worked with me on the code while we climbed saddle mountain. I can still remember Mom calling out code while I attempted to answer between gasps.

During the summer of 58, Dan instructed me on the theory of radio, drawing from his years of experience as a radarman in the Navy. My grandfather had a "ham desk" built and Dad helped me put it together. We built a DX20 and AR3 with Dad reading the instructions and me soldering. I still own (and use) Dad's soldering iron.

Well, the days of "elmering" are over for Dad and Mom. Dad is very sick and Mom is busy selling books but they gave me something far more important than a working radio. They gave me an Attitude. And now, as your new President, I bring this attitude to you and our club. The attitude I learned was one of a fascination for something new, a willingness to help and a desire to get others involved in the fun of helping. I started to have fun in ham radio when I joined OTV ARC and I really started to have fun when I got INVOLVED. Now you can too and it will be my number one project to raise the percentage of our members who are active in club activities. They are numerous and fun and I look forward to working with you.

*Update: Time marches on. After 80 years, Dad has become a silent key. Let's all remember when we have a chance to help someone else that the sooner the better. Tomorrow may really be too late.*

73, Alan Churchill, AA7CV

## 2 Meter Contest Results

By Jim Schaeffer, KB7ADH

*And the winner is.....Al Berg, WB7SIC.*

Al managed to pull out 16 contacts during the 2 meter FM contest on Tuesday, November 26. Al will be awarded the contest plaque at the January meeting.

Close on Al's heels, with 12 contacts, was runner-up Carter Harrison, WB7WHO. A total of 22 stations were heard during the contests. Here is a role call of those heard on the air:

W7HDI	K0PB	NB7W	KE7BB
N7UJC	N7UIY	N7REZ	KB7ADH
KB7GKF	N7MAQ	K6RH	W7HPI
WB7WHO	WB7SIC	KC7PS	KA7WDV
KG7PV	N7UCE	WB7DID	N7EPE
N7MTT	KA7RNN		

Thanks to all who participated. Watch this newsletter for an announcement of the 10 meter SSB contest coming up soon.

If you would like to help the contest committee for 1992, contact Jim Schaeffer, KB7ADH, at 245-2518.

## January Program

*Contesting in the Nineties*  
Larry Tyree N6TR

**Remember:**  
*We're back at the Elks!*

# New OTVARC Officers Elected

By Ray Deeth, K7VDQ

*Your OTVARC officers for 1992 were announced at the Holiday Festival. They are as follows:*

**PRESIDENT: Alan Churchill AA7CV.**

Interestingly, Alan has the least amount of time with the club of all the new officers. He has been a ham for three years and a member of the club for two. He became interested in serving as an officer while being editor of the Newsletter. Alan operates mostly on 20 phone and CW and is currently kicking the tires on 2M equipment so look for him soon on 6.90. He owns an IBM PC so maybe packet isn't too far off.

**VICE PRESIDENT: Gene Buell KA7KBH.**

Gene has been with OTVARC for eight years. He took his ham tests after going through the OTVARC training classes. He has been active in Sea-Pac since before it was Sea-Pac and has participated in most Field Days. He has been a "Traveler" since the inception of that group. Gene is a past club president as well as volunteering for numerous committees. When he gets on the air it is usually 2M FM. He isn't a digital man or a contester. He loves ragchewing.

**SECRETARY: Bradley Beach N7NVC.**

Bradley joined the club 12 years ago when Al Berg was president and meeting at Elmers. He has been active in Sea-Pac as head of registration as well as other duties. Brad is on 10 SSB mostly with his ICOM 725. He enjoys contesting and placed well in last years April Fools 10M contest. He owns a 286 PC and even knows how to do BASIC programming.

**TREASURER: Carl Clawson, WS7L.**

Carl joined OTVARC almost as soon as he got his license four years ago. He was extremely visible last year at field day. He was the one with the clip board permanently attached to his hand. When not working high speed CW on HF, he is very active as net controller every Saturday night on the 147.32 ARES net. He has been involved with ARES for nearly two years. Carl is also on packet and completed a six node connection to San Francisco last year. Carl will also be active at Sea-Pac as equipment co-ordinator for the radio games.

**TRUSTEE: Susan Benson, N7EPE.**

Sue has been licensed for twelve years and has held many positions at OTVARC including Secretary and Vice President. She is currently the treasurer of Sea-Pac. She operates on 10 SSB but mostly VHF. She is involved in many public service activities including Cycle Oregon (three years now).

**TRUSTEE: Pat Griffiths, KA7UFG.**

Pat has been a big help to the club over the years. She was a trustee three years ago so knows how the board works. Pat has been active in Sea-Pac and was heavily involved in the ARRL National Convention several years ago. She is on the board of Friendship Amateur Radio Society and is the chairwoman of the Scholarship committee. Pat is an avid contester on 10M SSB. She can also be heard on 2M and 440.

**TRUSTEE: Al Berg, WB7SIC.**

Al has been re-elected to the board. He holds the record for the longest board service of anyone in the club. He started as our founder and president and has served on the board ever since. He brings to us the "historical perspective" that is so important to an ongoing service club such as ours. Al is an avid DXer and earned his WAS as a Novice on 40 CW. He has been Field Day chairman four years and newsletter editor for six. He is also a board member of ARRG.

**TRUSTEE: Alan Roehl, KO7B.**

Alan is another re-elected member of the board. He has been involved in the testing services of OTVARC for most of his ten years with the club. He started the testing process at Sea-Pac in 1984. He has been active mostly on 10 but did enjoy working OSCAR with 2M up and 10 down.

**TRUSTEE: Jim Schaeffer, KB7ADH.**

Jim also served on the 1991 board. He has been on the Sea-Pac committee for three years. He has been involved in many public service functions including Cycle Oregon, Hood to Coast Run and Rose Festival. He is kind of known as Randy's "right hand man". He has taken part in the Project Night activities and has built a 40/80M transceiver and a 2M brick. He operates mostly on 2M (public service) but also gets on 80M and 15M SSB. Jim is just looking into packet so stay tuned.

*There you have it. All in all, we have a very well balanced group of volunteers for 1992. Everything from "no previous experience" to "charter membership". This diverse group reflects our club membership well. Thanks for voting!*

---

## *Items Of Interest*

---

### ***OTVARC is Moving***

It's true. We're headed back to the Elks in Beaverton starting with the January 1992 meeting. We have the large room in the back just like before. You don't need to buy meals but if you want to, they are available at the same price paid by Elks members (around \$6). The back door will be made available for moving in large items. See you there.

### ***Volunteering in Action***

During the November meeting, one of our members, Al Berg, noticed that our club overhead projector was being carried about like a dead chicken - by it's neck. As so many of our members have done in the past, Al took it upon himself to solve the problem. No committee, no voting, no meetings to discuss the situation, he just solved the problem. Thanks to Al's willingness to jump right in, we now have a very nice carrying case for our club projector. Thanks Al.

### ***And a Wonderful Time Was Had By All***

The Holiday Party was great. The food was really tasty, the entertainment was amazing and Janet Bell should be thanked profusely next time you see her. Good job Janet. Now, about next year...

### ***Are You Warm Enough?***

OTVARC still has six jackets left and available for immediate warming. They are bargain priced. One jacket can eliminate a winter cold so give Ray Deeth, K7VDQ a call at 324-4502 to get your order in.

### ***Novice/Tech Training Complete***

Alan Roehl, KO7B reports that the novice/Tech training class finished on Dec 3, 91. All (or most) of the 16 students will be taking their exams soon. Thanks very much to Alan and his hearty band of trainers.

### ***A Free Lunch***

Well, hold on. There really is a free lunch. When you join or renew your membership in the ARRL, you can put \$2 in the club treasury while not spending any more money of your own. Simply make checks payable to OTVARC for \$24. We will write a check to ARRL for your annual membership and keep \$2. Thanks for your help. Contact Carl Clawson, WS7L, club treasurer for any other questions.

### ***Think Security***

OTVARC is doing security for Sea-Pac this year so sharpen your pencils for signing up. We will all be involved with putting in an hour or so this year. For every hour you serve in the security effort, you will receive one chance to win a great 2M handheld.

### ***Board Meeting***

The next board meeting is scheduled for Jan 7, 1992 at The Hallmark Inn across from the Hillsboro airport. Some of us will be there for dinner at 6PM. Business meeting starts at 7 P.M. All members are invited (as always) but voting is limited to the officers and board members.

### ***For Sale***

Old National receiver circa 1940. Completely reconditioned and works great. General coverage. CW & AM. Price firm at \$200 or will trade for 2M handheld. Contact Alan Churchill, AA7CV at 639-5660.

**Remember: The OTVARC Club 2 Meter  
Repeater is on 146.90 (-600)**

## Retailer Spotlight

By Alan Churchill, AA7CV

This month we won't be spotlighting a retailer. Rather, it is a wholesale electronics company that has been good enough to us hams to open their doors to us.

Norvac Electronics is the builders paradise. If it is electronic and if you can look long enough, they have it at Norvac. Located in the old Koll Business Center at 7940 SW Nimbus Ave in Beaverton, they are conveniently located for most of us.

If you need parts and are too far away, they will take orders over the phone and UPS the product to you. They even take personal checks.

On a recent visit with Tim Baker, the general manager, he gave me a short history lesson about Norvac. As usual, the story is more interesting than you might have thought. Norvac was started in 1978 by Keith Dodd, a merchant marine.

He operated the store out of the proverbial garage before moving to a location on Hall Blvd. Later they moved into the huge (10,000 sq ft) store which is their current location. They also have two other stores. One in Salem and one in Eugene.

Product lines include Wire, Coax, Connectors, screws soldering supplies, PC boards, lamps, knobs, computers, plugs, Amidon, Chemicals, test equipment galore and of course books. And more books. And more books. They even have the call books on sale right now for cheap.

The front of the store is devoted to computers and accessories. They sell boards, cabinets and every part you need to build your own computer.

The back half of the store is dedicated to things that end in pf, ohms, ft and things that start with NTE, LMB and Ten Tec.

The next time you are in, look up Tim, Ron, Bill or Greg. All of them are technically competent and anxious to help you with your project. They are especially good at suggesting substitutions if needed. Prices are good, selection is excellent and the help is qualified.

Next time you are in Beaverton, drop by. Don't leave the kids in the car though. Like me, you will probably be in there longer than you thought you would be.

## Station of the Month

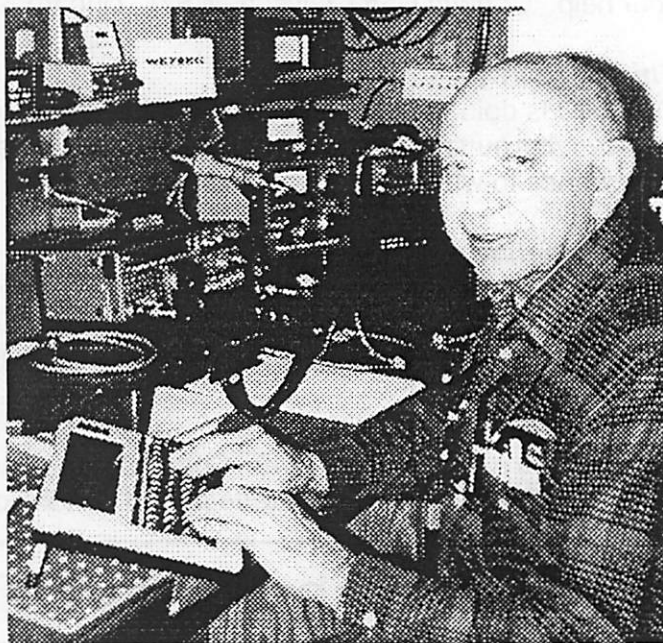
By Alan Churchill, AA7CV

Walking into the shack of Paul Schaff, WB7BBG, makes you want to work portable. Everything about the station is ready to go. It all works on 12V, it is all small and it can all be transported in just a few minutes to an emergency site. Paul is in a constant state of readiness.

Paul got started in radio 16 years ago and has been in nearly every phase of our hobby. His station consists of a Kenwood TS 430S, Packett station, Kaypro CPM computer (must have batteries in series) and an Argonaut 509 CW rig. He is of great help to new hams and will assist anyone having problems getting packet going. He is active in ARES (net control) and enjoys QRP work. On a trip to the Canadian Rockies, he worked Texas on 40 CW using two watts into a longwire. His traveling companions were impressed.

Paul is the chairman of the American Red Cross Radio Advisory Group and assistant District Emergency Coordinator for district 1 of ARES. He serves as ARES net control one night a week and joins in the net every other night. He also works Maritime net lots and passes traffic when needed. In spite of all this emergency work, 15M CW is still Paul's favorite mode. His tribander assures a strong signal.

One last thing. While visiting with Paul, he gave me the drawing of the 2M emergency antenna shown elsewhere in this newsletter. I built two of them and they work great.



Paul, WB7BBG

Here are a few suggestions for the WD4JNS J-pole antenna.

1. You will note that finished length is 54 inches, but it's a good idea to start with a piece a few inches longer (or just work from the end of a coil of cable) and then trim to size when done. That way if you have a problem you can just cut off the bottom end and don't have to discard the whole thing.

2. Start at bottom and work up step by step.

3. Coax can be any length.

4. Use UHF (PL-259) Plug on coax and then add adaptor for BNC if you want to use with hand-held transceiver.

5. "Shave" plastic off of wire very carefully. If you cut through the wires where the coax attaches just cut off this part and start over.

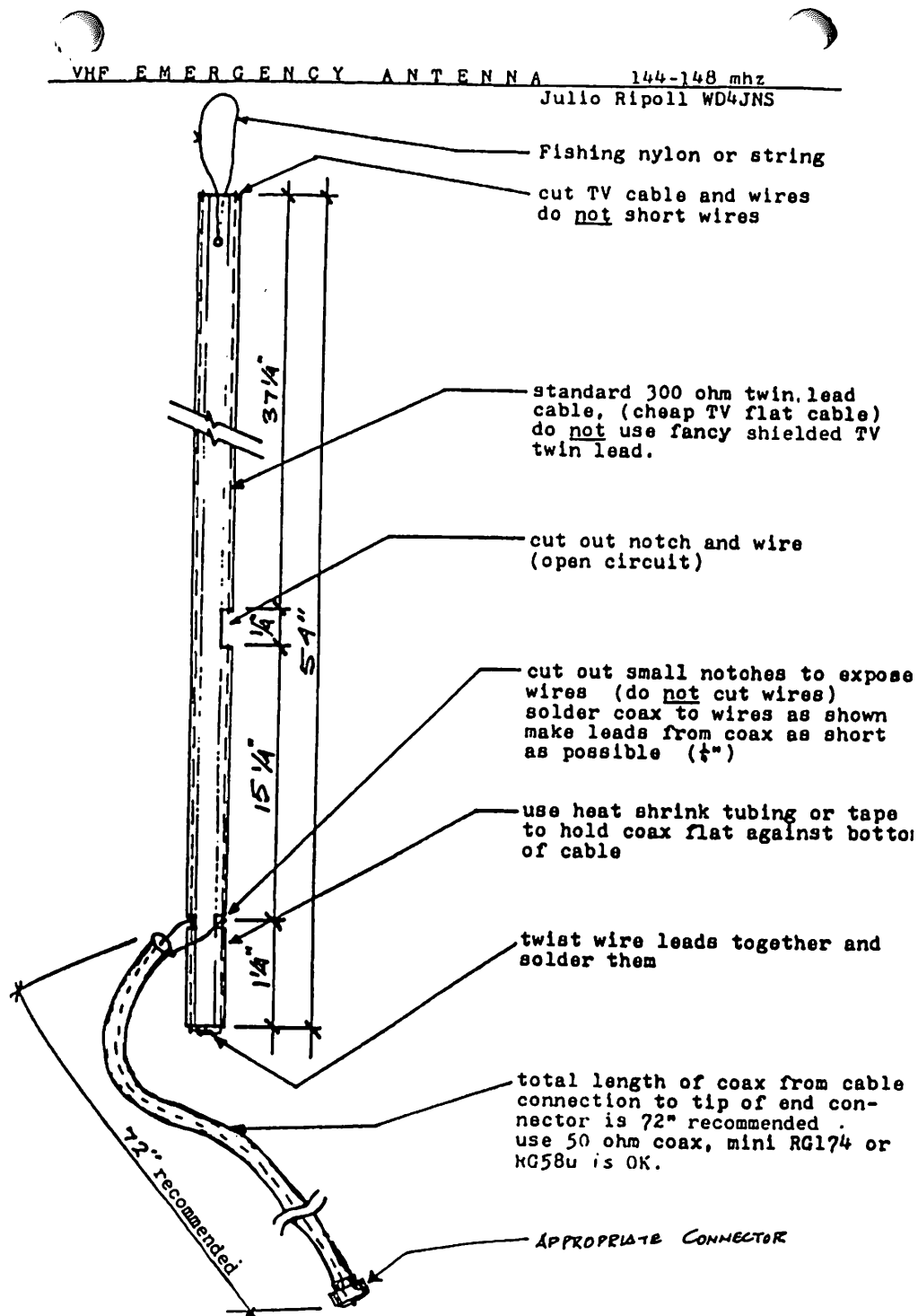
6. Be sure to tin exposed wires and ends of coax before trying to solder them together.

7. Cut to total length of 54 inches and attach loop. If you have a VHF SWR meter available then start a little longer and trim one-eighth inch at a time while testing for low SWR at a frequency of 147.00 Mhz.

8. Final step is to tape coax to cable. Heat shrink tubing can be used instead of tape if you desire.

9. Suggestion: For a stable installation try threading antenna and coax through a piece of PVC tubing and stand on floor in corner of room. If necessary move it around for best signal. A slight change of location may make a big difference.

10. If you have questions, call 244-7420. I will be glad to help you with SWR meter.



**SHEARSON  
LEHMAN  
BROTHERS**



**MARK FARSDAHL, CFP**  
FINANCIAL CONSULTANT

610 EAST YAKIMA AVENUE  
P.O. BOX 447  
YAKIMA, WA 98907

509 248 5220 800 572 2230 WA  
800 634 5793 US

## BORSCH ELECTRONICS

Communications Servicing

9935 S.W. Johnson St.  
Tigard, OR. 97223

Joe Borsch W7PNS

(503) 684-5201

WORLDWIDE DISTRIBUTION



**HAM  
RADIO  
OUTLET**

**Earl Reinoehl**  
Manager  
KE7OA

11705 S.W. Pacific Hwy.  
Portland, OR 97223  
(503) 598-0555  
1-800-854-6046

ANAHEIM, CA • ATLANTA, GA • BURLINGAME, CA  
DENVER, CO • OAKLAND, CA • PHOENIX, AZ • PORTLAND, OR  
SALEM, NH • SAN DIEGO, CA • VAN NUYS, CA • WOODBRIDGE, VA



RAY DEETH

**SCREENING INC.**

Screeners of textiles, vinyl, plastics  
and metals

1982 N.E. 25th, #12  
Hillsboro, OR 97124

Phone (503)648-3217  
Fax (503)648-9305

## Upcoming Ham Test Sessions

By Alan, KO7B

Several members of OTVARC formed a VE team to provide examination sessions during November and December. The sessions provided an opportunity for students of Bill Vesser's upgrade class to be tested. Upgrades obtained were as followed:

<u>License Class</u>	<u>November 21</u>	<u>December 12</u>
Novice	0	1
Technician	4	7
Technician w/ HF	3	4
General	1	1
Advanced	2	2

<u>Date</u>	<u>Registration</u>	<u>Doors Close</u>	<u>Location</u>	<u>Contact</u>	<u>Phone</u>
January 11	1:00 P.M.	1:30 P.M.	Clatsop County Emergency Center Basement of Jail 7th and Dwayne, Astoria, Oregon	146.66 repeater in Astoria	
January 12	12:30 P.M.	1:30 A.M.	Portland Adventist Medical Center Educational Center A 10123 S.E. Market	Edith Litvin KA7MIF	642-5803
February 2	9:30 A.M.	10:00 A.M.	Mt. Hood C.C., Room 1001 26000 S.E. Stark	Buck Summers WT7S	760-7545
March 14	12:30 P.M.	1:00 P.M.	(To Be Determined)	Lea Ball AL7W	777-1032

## Upcoming Events

January 8	OTVARC Club Meeting Beaverton Elks Club
January 11	Upgrade Test Session Clatsop Co. Emergency Center Astoria, Oregon
January 12	Upgrade Test Session Portland Adventist Medical Center
February 2	Upgrade Test Session Mt. Hood Com. College
June 12, 13, 14	Sea-Pac Ham Convention Seaside, Oregon

The OTVARC NEWSLETTER is published monthly by the Oregon Tualatin Valley Amateur Radio Club, Inc.

The opinions, views and recommendations of its contributors are not necessarily those of the Club, it's officers, advertisers or the Editorial Staff.

Articles or letters may be submitted to:

Alan Churchill, AA7CV, Editor  
14145 SW 98 Court  
Tigard, Oregon 97224

Deadline for all material is the 20th of the preceding month.

All correspondence other than for this newsletter should be sent to:

Oregon Tualatin Valley Amateur Radio Club  
Post Office Box 5132  
Aloha, Oregon 97006-0132.

Meetings are held on the second Wednesday of each month.

### Advertising Policy

Advertising space is available in this newsletter. This newsletter reaches nearly 250 hams in the Portland area each month and may be a good investment of your advertising dollars. The present rates are:

Full Page	8" X 10"	\$40 / Month or \$400 / Year
Half Page	8" X 5"	\$25 / Month or \$250 / Year
Quarter Page	4" X 5"	\$15 / Month or \$150 / Year
Business Card	2" X 3"	\$ 7 / Month or \$ 70 / Year

Classified ads are no charge to members. To place a display or classified ad, contact Alan Churchill, AA7CV.

## OREGON TUALATIN VALLEY AMATEUR RADIO CLUB

### Executive Board

Feel free to contact the Board of OTVARC to answer any questions you may have.

President:	Alan Churchill	AA7CV	
Vice Pres:	Gene Buell	KA7KBH	
Secretary:	Bradley Beach	N7NVC	
Treasurer:	Carl Clawson	WS7L	
Trustee:	Susan Benson	N7EPE	
Trustee:	Al Berg	WB7SIC	640-5456
Trustee:	Pat Griffiths	KA7UFG	
Trustee:	Jim Schaeffer	KB7ADH	245-2518
Trustee:	Alan Roehl	KO7B	292-5243

### Other Club Contacts

#### Club Trailer / Club Equipment / Technical:

Dee Lynch	KA7NPN	646-4580
Terry Biggs	WB7CHK	648-3687

#### Contests:

John Koenig	NB7W	641-3575
-------------	------	----------

#### Health and Welfare:

Al Berg	WB7SIC	640-5456
---------	--------	----------

#### Public Service:

Randy Stimson	KZ7T	297-1175
---------------	------	----------

#### Newsletter:

Jeff Durr	KA7AKU	645-3205
-----------	--------	----------

#### Project Night:

Terry Biggs	WB7CHK	648-3687
-------------	--------	----------

#### Scholarships:

Pat Griffiths	KA7UFG	649-0837
---------------	--------	----------

#### Travelers:

Open

OTVARC OFFICER LIST  
CLUB HISTORY

1978

P. George Morgan WB3ELG  
V. Dave Marlow AF7G  
S. Bill Altman WB7CHU  
T. Warren Winner W7JDT

1979

P. Dave Marlow AF7G  
V. Bob Orr KB7CC (WF7Q)  
S. George Morgan WB3ELG  
T. Mac McQuary W7KBR  
(mid-term) Warren Knight KA7EAN  
(N7BIJ)

1980

P. Al Berg WB7SIC  
V. Win Tatro WB7TYR  
S. Carter Harrison WB7WHO  
T. Warren Knight N7BIJ

Trustees

Dennis Fewell AI7G  
Doug McMurdo W7XI  
Bob Orr KB7CC (WF7Q)

1981

P. Al Berg WB7SIC  
V. Doug McMurdo W7XI  
(August) Steve Das N4BOS  
(Sept.) Randy Cobb KA7HJT (WN7W)  
S. Carter Harrison WB7WHO  
T. Warren Knight N7BIJ

Trustees

Dennis Fewell AI7G  
Bob Dunshee W7LYK  
Bob Orr KB7CC (WF7Q)

1982

P. Dick Powers WB7ADM  
V. Randy Cobb KA7HJT (WN7W)  
S. Linda Cereghino N7CZY  
T. Warren Knight N7BIJ

Trustees

Al Berg WB7SIC  
Bob Orr KB7CC (WF7Q)  
Roger Staeyert K7RXV  
Mark Walker W7CLU  
Bill Whiting WA6VPA  
(Bill gone in Oct.)

1983

P. Bert Schmidt W7JWG  
V. Doc Miller KA7BSD  
S. Linda Cereghino N7CZY  
T. John Koenig N7CRP (NB7W)

Trustees

Al Berg WB7SIC  
Randy Cobb KA7HJT (WN7W)  
Warren Knight N7BIJ  
Bob Orr KB7CC (WF7Q)  
Dick Powers WB7ADM

1984

P. Dave Parker W7LJN  
V. John Haide WA7CZA  
S. Linda Cereghino N7CZY  
T. John Burgess N7DCQ

Trustees

Al Berg WB7SIC  
Randy Cobb KA7HJT (WN7W)  
Warren Knight N7BIJ  
John Koenig N7CRP (NB7W)  
Jerry Norman ND7T

1985

P. Geno Buell KA7KBH  
V. Hanford VanNess KE7BB  
S. Jeff Freedman K7JF  
T. Randy Stimson KZ7T

Trustees

Al Berg WB7SIC  
Terry Biggs WB7CHK  
Linda Cereghino N7CZY  
Greg Milnes W7AGQ  
Dave Parker W7LJN

1986

P. Greg Milnes W7AGQ  
V. Willis Ranes N7DZR  
S. Jeff Freedman K7JF  
T. Randy Stimson KZ7T

Trustees

Al Berg WB7SIC  
Linda Cereghino N7CZY  
Randy Cobb KA7HJT (WN7W)  
Dee Lynch KA7NPN  
Warren Knight N7BIJ



1987

P. Paul Lucas WB6SHR  
V. Roger Steyaert K7RXV  
Jeff Freedman K7JF  
Susan Benson N7EPE

Trustees

Al Berg WB7SIC  
Terry Biggs WB7CHK  
Randy Cobb KA7HJT (WN7W)  
Dee Lynch KA7NPN  
Greg Milnes W7AGQ

1988

P. Roger Steyaert K7RXV  
V. John Ewing K7SHC  
S. Jeff Freedman K7JF  
T. Susan Benson N7EPE

Trustees

Al Berg WB7SIC  
Terry Biggs WB7CHK  
Randy Cobb KA7HJT (WN7W)  
Ralph Karls WB7VGS  
Alan Roehl KO7B

1989

Ray Deeth K7VDQ  
V. Janet Bell W7FJC  
S. Steve Coan KA7MOW  
T. Susan Benson N7EPE

Trustees

Al Berg WB7SIC  
Terry Biggs WB7CHK  
Bud Butterfield KC7PS  
Pat Griffiths KA7UFG  
John Koenig NB7W

1990

P. Ray Deeth K7VDQ  
V. Rick Schouweiler KA5OLH  
S. Steve Coan KA7MOW  
T. Ken Gilbert WR7D

Trustees

Al Berg WB7SIC  
Lynn Hurd WB7UNU  
John Koenig NB7W  
Marty McKillip KD7LA  
Greg Milnes W7AGQ

1991

P. Ray Deeth K7VDQ  
V. Sue Benson N7EPE  
S. Steve Coan KA7MOW  
T. Ken Gilbert WR7D

Trustees

Wes Allen K7WWG  
Al Berg WB7SIC  
Lynn Hurd WB7UNU  
Alan Roehl KO7B  
Jim Schaeffer KB7ADH

1992

P. Alan Churchill AA7CV  
V. Geno Buell KA7KBH  
S. Brad Beach N7NVC  
T. Carl Clawson WS7L

Trustees

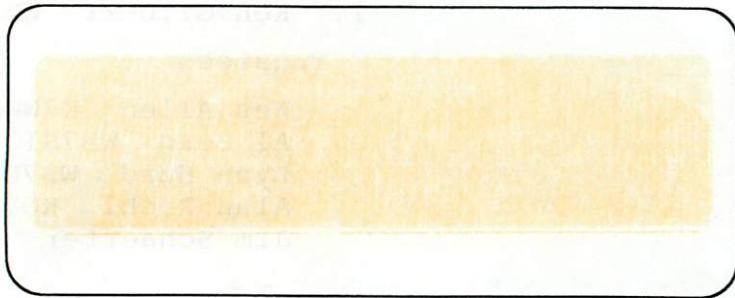
Sue Benson N7EPE  
Al Berg WB7SIC  
Pat Griffiths KA7UFG  
Alan Roehl KO7B  
Jim Schaeffer KB7ADH

submitted by WB7SIC

FAMOUS HAMS

K7UGA	Barry Goldwater
5CY	Howard Hughes
EA1JC	King Juan Carlos-Spain
HI8MMJ	Manny Moto
JY1	King Hussein-Jordan
W2SKE	Bill Leonard-CBS
WA4KCG	Chet Atkins
WA6BGA	Ray Noble
K6DUE	Roy Neal-NBC
W6EZV	Curtis LeMay
KA6HVK	Burl Ives
WB6RER	Andy Devine
FO8GJ	Marlon Brando
W6UK	Alvino Ray
WA7WYN	Andy Griffith
KA7EVD	Donnie Osmond
KØHWY	Tex Beneke
K2SSQ	Henry Feinberg-ET
WB4KCG	Ronnie Milsap
WA6PVA	Joe Rudi-Baseball

FIRST CLASS MAIL



Address Correction Requested

Aloha, Oregon 97006-0132

Post Office Box 5132

Oregon Tualatin Valley Amateur Radio Club

## **We Want To Be Your Ham Store! Come In And See A Whole New PR!**

- Equipment (In Stock) All Major Brands, Lowest Prices.
  - Still A Full Selection Of Parts
  - We're Happy, Willing And Able To Answer Your Questions
  - Our Equipment Display Will Not Be Beat. Come In And Work The World On HF (1500 watts), Or Use One Of The OSCAR Satellites. We Will Even Issue You A PR License And You Can Use The Station Anytime.
- Come In And See The PR Team: Bob N7JXN, Buck WT7S, Doug WA7EJP, Stan WB7OKN, And Rich KG7FS.

Free Coffee Too!!!

Amateur  
Equipment  
Shortwave  
Scanners

*Portland  
Radio*  
SUPPLY

Antennas  
Accessories  
Books  
Parts

234 S.E. Grand Ave., Portland, OR 97214 (503)233-4904